

ABSTRACT

A piezoelectric debris sensor and associated signal processor responsive to debris strikes enable an autonomous or non-autonomous cleaning device to detect the presence of debris and in response, to select a behavioral mode, operational condition or 5 pattern of movement, such as spot coverage or the like. Multiple sensor channels (e.g., left and right) can be used to enable the detection or generation of differential left/right debris signals and thereby enable an autonomous device to steer in the direction of debris.